PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.:	10/537,566
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Applicant:	Christopher Paul Revill
Group Art Unit:	3616
Examiner:	Karen J. Amores
Title:	HYDRAULIC SUSPENSION SYSTEM
Confirmation No.:	3569
Attorney Docket:	1316K-000028/NP

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RESPONSE

Sir:

In response to the Order of the Board of Patent Appeals and Interferences, enclosed is a corrected Table of Contents, page i, where the "Summary of the Claimed Invention" has been changed to "Summary of the Claimed Subject Matter" and a corrected "Summary of the Claimed Subject Matter", pages 5-8.

Applicants request the entry of these two substitute sections into the Appeal Brief filed April 14, 2009.

If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

Dated: March 4, 2010

By: _____
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SUMMARY OF THE CLAIMED SUBJECT MATTER

Referring now to Figure 1, original Claim 1 and to page 10, line 6 to page 11, line 2, page 11, line 28-33, currently pending Claim 1 defines a vehicle suspension system having a damping and stiffness system. The vehicle includes a first pair of diagonally spaced wheel assemblies 11, 13 and a second pair of diagonally spaced wheel assemblies 12, 14. The vehicle suspension also includes front and rear resilient support means 27, 28, 29 and 30 for supporting the vehicle above the wheel assemblies.

The damping and stiffness system includes at least one wheel ram 11, 12, 13 and 14 between each wheel assembly and the vehicle body and each ram includes at least one compression chamber 45, 46, 47 and 48. A load distribution unit 76 is interconnected between the compression chambers of the wheel rams. The load distribution unit including two piston rod assemblies 97 and 98, first, second, third and fourth system volumes 89, 92, 90 and 91 and first and second modal resistance volumes 93, 94 and 95, 96.

As illustrated in Figure 1 and defined in original Claim 1, the first piston rod assembly 97 defines first, second, third and fourth effective areas and the second piston rod assembly 98 defines fifth, sixth, seventh and eighth effective areas. The first effective area defines a movable wall of the first system volume 89, the second effective area defines a movable wall of the second system volume 92, the third effective area defines a movable wall of the first modal resistance volume 93 and the fourth effective area defines a movable wall of the second modal resistance volume 96. The fifth effective area defines a movable wall of

the third system volume 90, the sixth effective area defines a movable wall of the fourth system volume 91, the seventh effective area defines a movable wall of the first modal resistance volume 94 and the eighth effective area defines a movable wall of the second modal resistance volume 95.

The first system volume 89 increases in volume proportionately to the decrease in volume of the second system volume 92 and the third system volume 90 increases in volume proportionately to the decrease in volume of the fourth system volume 91. The volume of the first modal resilience volume 93, 94 decreasing in volume proportionately to the increase in volume of the first and third system volumes 89, 90 and the volume of the second modal resilience volume decreasing proportionately to the increase in volume of the second and fourth system volumes 91, 92.

The first and fourth system volumes 89, 91 are connected to the compression chambers of one of the pairs of diagonally spaced wheel assemblies 11, 13 and the second and third system volumes are connected to the compression chambers of the other pair of diagonally spaced wheel assemblies 12, 14. The damping system thereby providing substantially zero warp stiffness.

The vehicle is primarily supported by the vehicle resilient support means 27, 28, 29 and 30 which is functionally separate from the damping and stiffness system.

Referring now to Figure 1, original Claim 6 and to page 10, line 6 to page 11, line 2, page 11, line 28 to page 12, line 29, currently pending Claim 6 defines a vehicle suspension system having a damping and stiffness system. The vehicle includes at least two forward wheel assemblies 11, 12 and at least two rearward wheel assemblies 13, 14. The vehicle suspension system includes front and rear resilient support means 27, 28, 29 and 30 for supporting the vehicle above the wheel assemblies.

The damping and stiffness system includes at least two front 11, 12 and two rear 13, 14 wheel rams located between the wheel assemblies and the vehicle body and each ram including at least a compression chamber 45, 46, 47 and 48. A load distribution unit 76 includes a first pair of axially aligned primary chambers 89, 92 and a second pair of axially aligned primary chambers 90, 91. Each primary chamber including a piston 97, 98 separating each primary chamber into secondary chambers 89, 93; 92, 96; 90, 94; and 91, 95.

One of the secondary chambers 89 in the first pair of primary chambers being a first front system chamber connected to the compression chamber 45 of a front wheel ram on a first side of the vehicle. The other secondary chamber 96 in the first pair of primary chambers being a first back pitch chamber.

The other of the secondary chambers 92 in the first pair of primary chambers being a first back system chamber and being connected to a back wheel ram 18 on the first side of the vehicle. The other secondary chamber 93 in the first pair of primary chambers being a first front pitch chamber.

One of the secondary chambers 90 in the second pair of primary

chambers being a second front system chamber connected to the compression chamber 46 of a front wheel ram on a second side of the vehicle. The other secondary chamber 95 in the second pair of primary chambers being a second back pitch chamber.

The other of the secondary chambers 91 in the second pair of primary chambers being a second back system chamber and being connected to a back wheel ram 17 on the second side of the vehicle. The other secondary chamber 94 in the second pair of primary chambers being a first front pitch chamber.

The first and second front pitch chambers 93, 94 being interconnected to form a front pitch volume and the first and second back pitch chambers 95, 96 being interconnected to form a back pitch volume.

The vehicle is primarily supported by the vehicle resilient support means which is functionally separate from the damping and stiffness system.